Amendments to the Drawings:

The attached thirty (30) sheets of formal drawings replace the previously submitted informal drawings for Figures 1 to 27. No amendments to the drawings were made and no new subject matter has been added by the submission of these formal drawings.

Attachment: Replacement Sheets (30 pages)

Remarks

The Applicant respectfully requests reconsideration of this application in view of the following remarks. In this response, claims 1 and 4-8 have been amended, claims 9-20 have been cancelled and fourteen new claims, i.e., claims 21-34, have been added. Hence, upon entry of this amendment, claims 1-2, 4-8 and 21-34 are presented for examination.

Claim Rejection – 35 U.S.C. § 112

In the Office action, the Examiner rejected claim 1 under 35 U.S.C. §112, second paragraph. The Applicant submits herein proposed amendments to claim 1, which are thought to address the Examiner's concerns.

Claim Rejections – 35 U.S.C. §102
US Patent No. 6,674,756 of Rao et al.

In the Office action, the Examiner rejected claims 1-2 and 4-9 under 35 U.S.C. §102(e) for allegedly being anticipated by US Patent No. 6,674,756 of Rao et al. (hereafter "**Rao**"). The undersigned respectfully disagrees with the Examiner's characterization of the teachings and/or applicability of Rao to the claims and points out below several distinctions between the claimed subject matter and the teachings of Rao.

As presently understood by the undersigned, Rao generally relates to a physical network switch that may be partitioned into multiple virtual routers among which switch resources may be flexibly and dynamically allocated (see Abstract).

Briefly and by way of background, various embodiments of the present invention involve the use of a network operating system (NOS) executing on each of a plurality of processor elements of a switch. The NOS supports the creation of discrete customized services for multiple customers of a service provider operating the switch by providing each customer with a customized configuration of service object groups. The NOS, via an Object Manager (OM) 24, including: (i) an Object Manager Object Routing and Interface (OMORI) layer 44 on each processor element (PE) of the switch 12 to manage objects local to the PE; and (ii) an Object Manager Object Routing and Interface

Global (OMRIG) layer 42 executing on a processor element on which the system virtual router resides, manages global object groups, manages global object configurations, manages local objects and provides object communication services between objects in the same address space and objects in different address spaces (see Fig. 3, Fig. 4, Fig. 10 and the descriptions relating thereto).

Regarding independent claim 1, it has been amended herein to clarify the particular mechanisms and steps through which discrete customized services are provided to each customer of a service provider operating a switch performing the recited method. For example, claim 1 now makes it clear that a network operating system (NOS) is running on each processor element (PE) of the switch, a global object manager is established on a first PE associated with a system virtual router to manage global object groups and global object configurations and local object managers are established on each of the PEs of the switch to handle transferring messages between objects within a common address space and between objects residing in different address spaces. The distributed object management functionality and support for same by a NOS on each PE of a switch as now recited by claim 1 is not thought to be taught or reasonably suggested by Rao.

In the Office action, the Examiner indicates on page 4 that an operating system is an "inherent feature on computers." Claim 1 has now been amended to require "each of the plurality of PEs running a network operating system (NOS), the NOS allowing the switch to create discrete customized services for customers of a service provider operating the switch by providing each customer with a customized configuration of service object groups." It is respectfully submitted that such operating system involvement in creating discrete customized services for customers is not inherent and not taught or reasonably suggested by Rao. For at least this reason, claim 1, as amended is thought to be distinguishable over Rao.

In the Office action, the Examiner indicates establishing a global object manager is taught by Rao in col. 19, lines 39-43. However, the relied upon portion of Rao merely states:

> According to one embodiment of the invention, a default system router is created at system boot-up. This router is preferably

> always present in the system, and all resources initially belong to the system router until they are reassigned to the VRs.

The undersigned respectfully submits that neither the above-quoted portion of Rao nor other portions of Rao based on the undersigned's current understanding teach or reasonably suggest the expressly recited limitations of "establishing a global object manager associated with the NOS of the first PE, the global object manager being responsible for managing global object groups and global object configurations." For at least this additional reason, claim 1, as amended, is thought to be distinguishable over Rao.

In the Office action the Examiner indicates Rao teaches establishing a local object manager on each PE citing col. 8, lines 38-55 of Rao. The undersigned respectfully submits the cited portion of Rao relates to a connection manager 46 and a resource manager 38 of each forwarding module (FM) 10. According to the passage of Rao relied upon by the Examiner, the connection manager detects incoming calls to the FM and the resource manager manages and allocates local resources to the incoming call. Claim 1, as amended, requires "establishing, via the global object manager, a local object manager on each of the PEs, wherein the local object manager for a given PE of the plurality of PEs ***manages objects local to the given PE and transfers messages between objects*** on the given PE *[i.e., objects residing within the same address space]* and between objects on the given PE and objects on other PEs of the plurality of PEs *[i.e., objects residing in different address spaces]*" (emphasis added). To the extent the Examiner is equating the recited "local object manager" with either the resource manager or the connection manager of Rao, the undersigned respectfully disagrees. Neither Rao's resource manager nor Rao's connection manager purport to perform the functions attributed to the recited "local object manager." For at least this additional reason, claim 1, as amended, is thought to be distinguishable over the teachings of Rao.

In summary, claim 1, as amended, and its dependent claims, which add further limitations, are thought to be patentably distinguishable over Rao as a result of Rao's lack of teaching or suggestion regarding at least (i) a network operating system (NOS) on each of a plurality of PEs of a switch supporting the creation of discrete

customized services for customers of a service provider operating the switch; (ii) a global object manager as recited; and (iii) local object managers established on each of the PEs as recited. For at least these reasons, the undersigned respectfully requests the Examiner to withdrawal the rejections regarding claims 1, 2 and 4-8.

New Claims

Fourteen new claims, i.e., claims 21-34 are presented herein. Claims 21-24 are indirectly or directly dependent upon independent claim 1. Consequently, they are allowable for at least the reasons discussed above with reference to claim 1.

New independent claim 25 includes limitations similar to those discussed above with reference to independent claim 1. For example, claim 25 requires "creating discrete customized services for each customer of a service provider operating the switch by providing each customer with a customized configuration of service object groups" and "configuring and managing the service object groups by establishing a global object manager … responsible for managing a global object database, global object groups and global object configurations; establishing, via the global object manager, a local object manager on each of the plurality of PEs" where "each of the local object managers" manage "objects local to the corresponding PE of the plurality of PEs, including establishing object channels between objects residing in local and remote address spaces via connection end points supported by the NOS, each object channel representing a point-to-point asynchronous communications channel between a first object and a second object onto which services can be pushed." Consequently, claim 25 and its dependent claims, claims 26-33, are thought to be allowable over Rao for at least the reasons presented above with reference to claim 1.

New independent claim 34 is an article of manufacture comprising a computer-readable medium having instructions stored thereon that cause the method of claim 26 to be performed when such instructions are executed by one or more processor. As a result, claim 34 is allowable over Rao for at least the reasons presented above with reference to claim 1, as well.

Conclusion

The undersigned respectfully submits that the amendments and remarks presented herein have overcome the rejections, and that the pending claims are in condition for allowance. Accordingly, the undersigned requests that the rejections be withdrawn and that a Notice of Allowance be promptly issued for claims 1-2, 4-8 and 21-34.

Request for a Telephone Interview

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-284-5103.

Date: November 6, 2006

Respectfully submitted,
HAMILTON & DESANCTIS

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